

**METHODS, APPARATUS AND COMPUTER PROGRAMS FOR ENHANCED ACCESS  
TO RESOURCES WITHIN A NETWORK**

**ABSTRACT**

5

Provided are methods, apparatus and computer programs for enhanced access to resources within a network, including for controlling use of bandwidth-sensitive connections within a network and/or for automated recovery. Hash values are used as 'unique' identifiers for resources distributed across a network, and each one of a set of pool servers store the hash values for a set of computers within a LAN. When a resource is required, a hash value representing the resource can be retrieved and compared with hash values stored at a pool server to determine whether the pool server holds a matching hash value. Any such matching hash value found on the pool server represents an identification of a local copy of the required resource, because of the uniqueness property of secure hash values. The information within the pool server can be used to access the required resource. If a large resource such as a BLOB or new version of a computer program can be obtained from another computer within a LAN, a reduction in reliance on bandwidth-sensitive Internet connections and reduced load on remote servers becomes possible.

10

15